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# **USAID's Work on Climate Change: Risks and Opportunities**

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# Outline

1. Climate change risks and opportunities for development and infrastructure
2. USAID's Climate Change Initiative
3. Climate change and infrastructure linkages
4. Practical steps



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# Challenge: Climate change as a risk

## Examples of climate change impacts:

- Changes in water availability
- Sea level rise
- Change in forest cover
- Infrastructure damage
- Loss of biodiversity
- Reduced agricultural productivity
- Spread of disease





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# Challenge: Climate change as a risk

## Risks in an infrastructure context:

- Sea level rise and coastal infrastructure
- Heat stress, buildings and electricity demand
- Intense rainfall events and transport, urban drainage
- Variable water supplies, storing more water or living with less
- Urbanization and climate-resilient service delivery



Argentina. Source: WWF



West Africa. Source: UNDP



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# Challenge: Climate change as a risk

## The need:

Increase energy supplies and energy access

- World primary energy demand projected to increase by 40% by 2030
- Fossil fuels will account for 75% of increase
- Developing countries will account for 40% of increase in energy-related CO2 emissions by 2030
- Poorest need energy: 1.6 billion people lack access to modern energy, 2 billion people rely on traditional fuels for cooking



## The challenge:

Decoupling economic development and emissions. Achieving economic growth with significant changes in GHG emissions trends through Low Emission Development Strategies (LEDS)



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## Challenge: Climate change as an opportunity

- **Additional development financing:** \$30 billion in public funding pledged thru 2012 by developed countries, and new markets emerging: REDD+, carbon markets
- **More resilient, cleaner growth:** Less lost investment via lower damage costs, reduced externalities, more efficient economies, lower input costs
- **Private sector strengthening:** To attract investment in clean, efficient, resilient technologies
- **Integrated and forward-looking development:** Requires a systems perspective, and population and resource scenarios

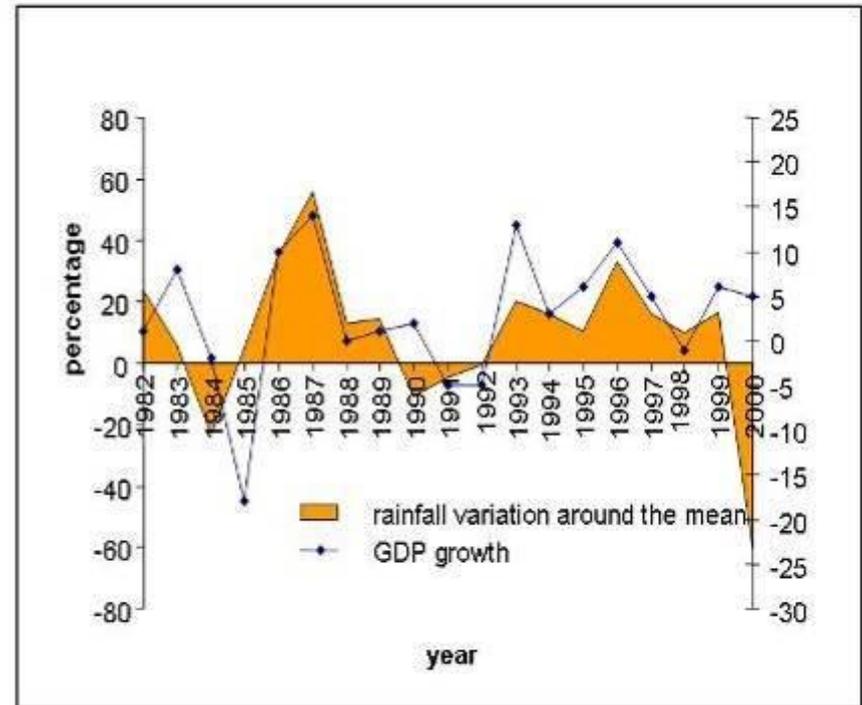


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# Planning for climate change in developing countries

- Major gaps in coping with current variability and meeting existing needs
- Developing country economies concentrated in climate sensitive sectors
  - E.g., ~70% developing country pop. derive income from agriculture
- Enormous opportunities to support clean, efficient energy, and land management for reduced emissions

### Ethiopia: Rainfall, GDP, and Ag GDP

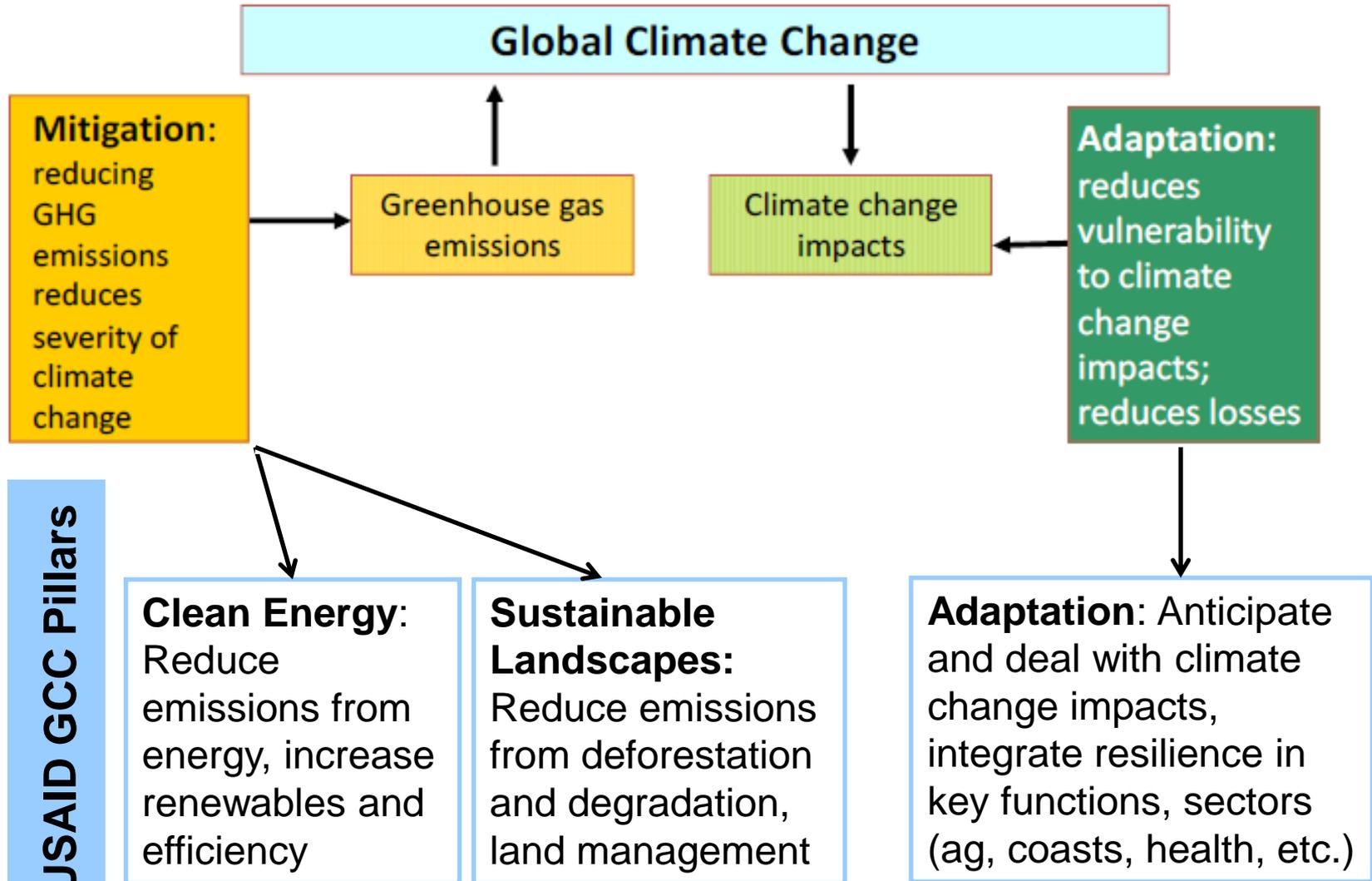


Source: The World Bank. "Managing Water Resources to Maximize Sustainable Growth: A Country Water Resources Assistance Strategy for Ethiopia." 2005.



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# How USAID addresses climate change





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# Climate change pillar examples

## Adaptation

- Capacity building among decision-makers to use hydro-meteorological data
- Improving weather and health surveillance of climate sensitive diseases
- Increasing water storage to deal with increased variability in water supply
- Introducing/enforcing flood or storm management plans

## Clean Energy

- Facilitation of financing for end-use energy efficiency/renewable energy
- Support for renewable energy through policy, regulatory, legal, tariff reforms
- Construct a transmission network and development of operating capacity for the transport of hydropower from a neighboring country
- Disseminating solar water heaters

## Sustainable Landscapes

- National or local forest and land use strategies with GHG benefits
- National baselines for forest-related emissions
- Priority actions identified in land use strategies that keep carbon in forests

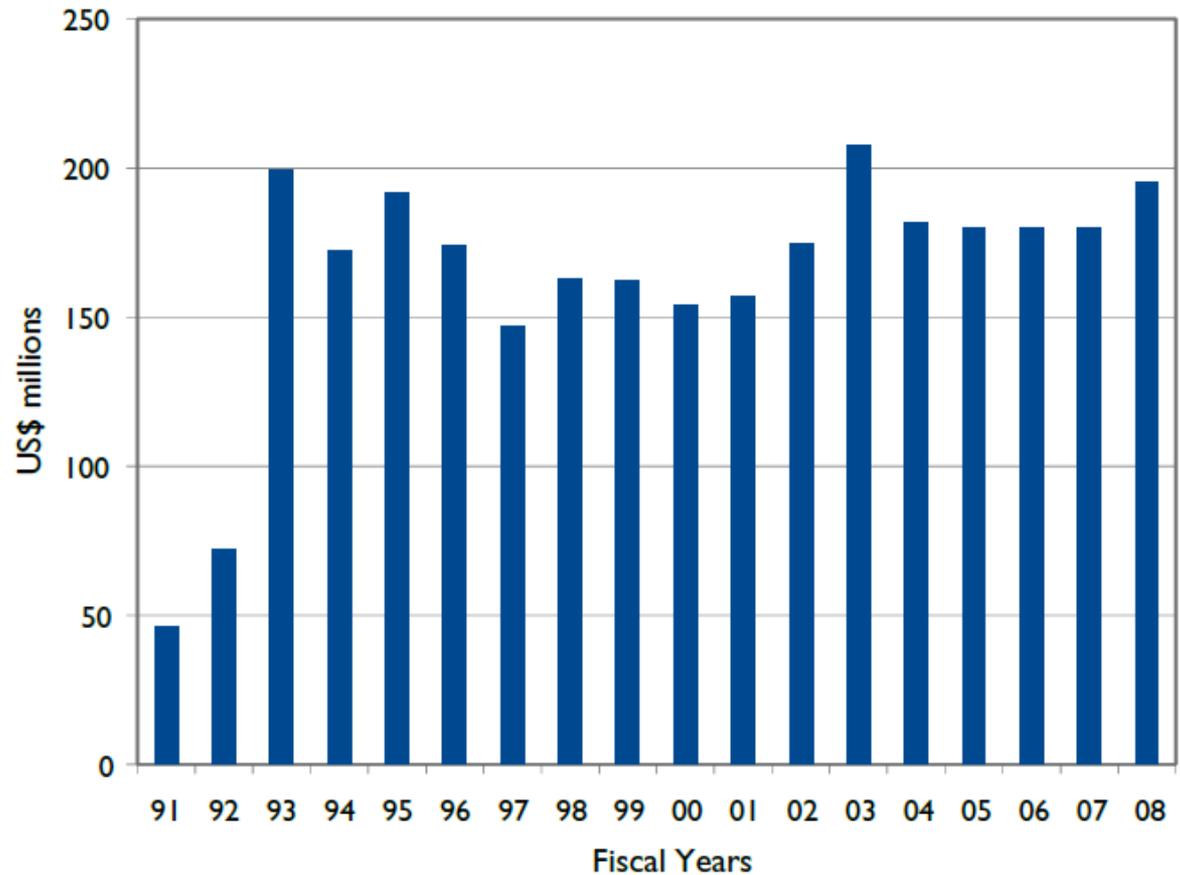


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# Historic USAID funding for climate change

## 2000-2009:

Global climate change and clean energy earmarks/directives, (\$150-\$200 m/year)





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## Increasing climate change funding

**2010-2012:** New Administration initiative tied to international negotiations, “**fast start funding**” from Copenhagen Accord

	FY2010 Budget	FY2011 Request
Adaptation	123	187
Sustainable Landscapes	152	175
Clean Energy	109	129
<b>TOTAL</b>	<b>384</b>	<b>491</b>

(millions of US\$)



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# Administration's Global Development Policy

## Addressing climate change is central to U.S. Global Development Strategy (document in USB resource packet):

- Support for national climate plans promotes **country ownership**
- Ensuring climate-sensitive sectors (infrastructure, agriculture, tourism, etc.) are resilient and investing in clean, efficient energy support **sustained economic growth**
- Improved public communication and education, and strengthened community, civil society, and private sector engagement with climate change strengthens **good governance**
- Pioneering advances in the application of science and technology, such as earth observations and information communication technologies can yield **game-changing investments**



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# Key linkages: Climate change and infrastructure

## Resilient infrastructure:

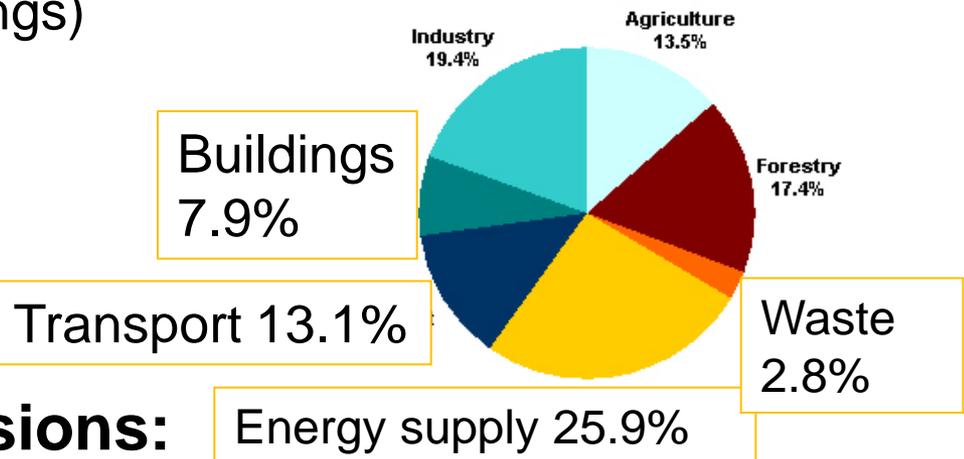
- Siting
- Scenarios for planning service delivery
- Design standards
- Insurance

## Reduced GHG emissions from infrastructure:

- Planning for lower energy consumption (transport, buildings)
- Energy sources
- Implications of roads on land conversion, e.g. forests and agriculture



Venice, Italy during a historic flood in 2008  
Andrea Pattero/AFP/Getty Images, in National Geographic



**2004 Emissions:**

Energy supply 25.9%



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## Leveraging a wealth of experience

### **Cities:**

- Asian Cities Climate Resilience Network (ACCRN)
- ICLEI Local Governments for Sustainability
- Clinton Climate Initiative Cities program

### **Knowledge/research:**

Economics of Adaptation studies, e.g.,

*Climate Proofing Infrastructure in Bangladesh: The Incremental Cost of Limiting Future Inland Monsoon Flood Damage* (2010, World Bank)

### **National climate change programs/policies:**

National Communications, NAPAs, programs, projects  
(See: [www.adaptationlearning.net](http://www.adaptationlearning.net))



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## Mainstreaming climate change at USAID

- Can address climate change in development work even without dedicated funding
- USAID has guidance, tools to help with this

### **Administrator Shah's May 2010 Letter to Missions**

*“Even if your mission will not receive dedicated FY 2010 or 2011 climate funds, I ask that you consider how climate will impact your work in such areas as food security, water, and health, and where co-benefits may exist.”*



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## Practical steps

*Given the lifetimes of infrastructure investments, how can they be designed to best serve their purposes and support climate-resilient, low-emission economic growth?*

### **Tools:**

- Vulnerability and impact assessments
- Scenarios and modeling
- GHG calculators
- Guidance on EIA, SEA + climate change



Timor Leste stone retaining walls  
Source: World Bank



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# Innovative financing for climate change

## **USAID's Climate Change Fund** (*under development*)

- Connecting small and growing business in developing countries with capital and technical assistance
- Help capitalize a regionally focused investment fund
- USAID support through Development Credit Authority (DCA), reducing private risk and mobilizing \$30-50M of new debt
- Other development agencies invited to commit debt or equity

### **Ultimate goal:**

- Attract commercial capital for triple-bottom line returns
- Demonstrate climate change investments have sustainable and scalable financial returns



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**Thank you**

**Questions?**

[www.usaid.gov/climate](http://www.usaid.gov/climate)



Kiribati king tide  
Source: Greenpeace